APPENDIX D

MODELING REPORT

AIR QUALITY MODELING REPORT
SUMMIT SEED COATINGS
FEBRUARY 2008

1.0 PURPOSE

This air quality modeling report documents the air quality analyses prepared to support the Permit to Construct (PTC) application for the new seed coating line located at the Summit Seed Coatings (Summit) Caldwell facility.

This report describes the analyses estimating impacts of facility criteria air pollutant and toxic air pollutant (TAP) emissions on ambient air quality impact as a result of the proposed permit action. The results of the modeling analyses are shown to demonstrate those impacts do not exceed any applicable ambient air quality impact limits. It describes the complete modeling analysis, including results.

The emissions associated with the PTC application come from processes described in the permit application associated with a new hot water boiler, a new baghouse, and a new fluidized bed dryer vented through the new baghouse. Stack parameters are based on recommendations from the company that has designed the air system at the facility. The facility property boundary will serve as the ambient air quality boundary. A thorough defense of the ambient air boundary is included in Section 5 describing the Modeling Domain and model layout.

Analyses have been prepared for all criteria pollutants emitted above IDEQ modeling thresholds as a result of the proposed permit modification. These analyses document that impacts from the facility's emissions of those pollutants do not cause or significantly contribute to an exceedance of NAAQS standards. Analyses were also prepared for four TAPs whose increase in emissions exceeds the IDAPA 58.01.01.585 or IDAPA 58.01.01.586 EL thresholds. The increase of emissions of each TAP are shown to not lead to ambient air quality impacts above IDAPA 585 AAC or 586 AACC impact limits. Air dispersion modeling was conducted in accordance with EPA's Guideline on Air Quality Models and IDEQ's Air Quality Modeling Guideline.

2.0 MODEL DESCRIPTION / JUSTIFICATION

The model chosen was AERMOD, the United States Environmental Protection Agency (USEPA)–approved dispersion model. AERMOD is one of the most frequently used regulatory dispersion models in the United States since it replaced ISCST3 in EPA guidance. AERMOD is the most appropriate of the EPA-approved models given the site's physical characteristics and the variety of facility emission sources. The sophisticated Prime building downwash algorithm was conservatively applied for the facility. The model was applied as recommended in EPA's *Guideline on Air Quality Models* (2001), utilizing that document's regulatory default options and the simple and complex terrain options and other input settings consistent with State of Idaho Air Quality Modeling Guideline.

3.0 FACILITY EMISSIONS

Potential to Emit (PTE) calculations were prepared for the new equipment associated with the new seed coating line. The PTE values are shown in Table 1 below. A copy of a more detailed emission inventory documenting how all proposed emission rates were calculated will be included in the PTC application. As shown in Table 1 below, two criteria pollutants, NO_x and PM-10, have potential emission increases greater than the IDEQ modeling thresholds. Similarly, as shown in Table 2 four TAPs, cadmium, arsenic, formaldehyde and thiram have an increase in emissions above IDEQ modeling EL thresholds for modeling. Therefore, those three pollutants will be modeled.

Table 1 Criteria Pollutant PTE

Source Description	NOx T/yr	CO T/yr	PM-10 T/yr	SOx T/yr	VOC T/yr
New Hot Water Boiler (9.5 hP)	0.17	0.14	0.01	0.00	0.01
Fluidized Bed Burner	3.37	2.83	0.26	0.02	0.19
New Baghouse			2.06		
Total Emissions From New Equipment	3.54	2.97	2.33	0.02	0.19

Table 2 TAPs PTE

NON-CARCINOGENS				
Pollutant	Hourly Emissions[a]	Screening Level	Modeling Required?	Emissions
	(lb/hr)	(lb/hr)	(Y/N)	(tons/yr)
Antimony	0.00E+00	3.3E-02	No	0.0E+00
Barium	3.55E-05	3.3E-02	No	1.6E-04
Calcium Carbonate	4.88E-01	6.7E-01	No	2.1E+00
Calcium Sulfate	2.93E-01	6.7E-01	No	1.3E+00
Chromium	1.13E-05	3.3E-02	No	5.0E-05
Cobalt	6.78E-07	3.3E-03	No	3.0E-06
Crystalline Silica	5.00E-03	6.7E-03	No	2.2E-02
Copper	6.86E-06	6.7E-02	No	3.0E-05
Ethyl benzene	0.00E+00	2.9E+01	No	0.0E+00
Ethylene Glycol	2.26E-03	8.5E-01	No	9.9E-03
Fluoride	0.00E+00	1.67E-01	No	0.0E+00
Hexane	1.45E-02	1.2E+01	No	6.4E-02
Manganese	3.07E-06	3.33E-01	No	1.3E-05
Mercury	2.10E-06	3.E-03	No	9.2E-06
Methanol	2.84E-01	17.3	No	1.2E+00
Methyl Acetate	9.45E-02	40.7	No	4.1E-01
Mica	6.00E-03	0.2	No	2.6E-02
Molybdenum (insoluble)	8.88E-06	6.67E-01	No	3.9E-05
Molybdenum (soluble)	9.75E-04	3.33E-01	No	4.3E-03

Naphthalene	4.93E-06	3.33E+00	No	2.2E-05
Pentane	2.10E-02	1.18E+02	No	9.2E-02
Phosphorous	0.00E+00	7.E-03	No	0.0E+00
Selenium	1.94E-07	1.3E-02	No	8.5E-07
1,1,1 - Trichlorethane (Methyl Chloroform)	0.00E+00	1.27E+02	No	0.0E+00
Thiram	1.22	3.33E-01	Yes	5.33
Toluene	2.75E-05	2.5E+01	No	1.2E-04
o-Xylene	0.00E+00	2.9E+01	No	0.0E+00
Zinc	2.34E-04	6.67E-01	No	1.0E-03

CARCINOGENS				
Pollutant	Max. Hourly Emissions	Screening Level	Modeling Required?	Emissions
	(lb/hr)	(lb/hr)	(Y/N)	(tons/yr)
Arsenic	1.62E-06	1.5E-06	Yes	1.31E-09
Benzene	1.70E-05	8.0E-04	No	6.97E-09
Beryllium	9.69E-08	2.8E-05	No	5.27E-10
Cadmium	8.88E-06	3.7E-06	Yes	4.14E-09
Chromium VI	0.00E+00	5.6E-07	No	4.88E-10
Formaldehyde	6.06E-04	5.1E-04	Yes	2.49E-07
Nickel	1.70E-05	2.7E-05	No	7.46E-09
Benzo(a)pyrene	9.69E-09	2.0E-06	No	3.98E-12
Benz(a)anthracene	1.45E-08	NA	NA	5.98E-12
Benzo(b)fluoranthene	1.45E-08	NA	NA	5.98E-12
Benzo(k)fluoranthene	1.45E-08	NA	NA	5.98E-12
Chrysene	1.45E-08	NA	NA	5.98E-12
Dibenzo(a,h)anthracene	9.69E-09	NA	NA	3.98E-12
Indeno(1,2,3-cd)pyrene	1.45E-08	NA	NA	5.98E-12
Total PAHs	9.21E-08	2.00E-06	No	3.79E-11

Impact analyses were prepared for all average periods for which ambient air quality standards existed for all pollutants modeled (annual average for all pollutants except the IDAPA 585 non-carcinogen Thiram, plus 24-hour average for PM-10 and Thiram). Emission rates modeled represent conservative estimates of annual average emissions, and are consistent with requested maximum throughputs and emission rates. All facility emission sources were conservatively assumed to operate continuously, except the pressure washer which was modeled assuming 6 hours of operation per day to conservatively be consistent with the 2,000 hour per year operating limit.

4.0 MODEL SOURCE DATA

Sources included in the modeling include all emission sources documented in the emission inventory for all pollutants emitted above IDEQ modeling thresholds. All sources are stacks, modeled as point sources. They are depicted with actual stack data based upon measured conditions or manufacturer's specifications. IDEQ guidance was followed in setting the exit velocities to 0.001 m/s for the office furnace and all space heater stacks, since those stacks have rain caps. Consistent with IDEQ guidance, the pressure washer stack was modeled with the same exit velocity and a 0.001 meter diameter stack because it vents horizontally. All other stacks were verified to vent vertically without any physical blockage to flow. The warehouse building was included in downwash calculations, which used the Prime downwash algorithm. As verified in the permit emission inventory, no fugitive sources of any of the pollutants were identified or modeled. The pressure washer was modeled assuming 6 hours per day of operation (from 8-10AM, from noon – 2PM, and from 3-5PM).

The facility emission inventory verified six pollutants have the potential to be emitted above IDEQ modeling thresholds: NO_x, PM-10, IDAPA 585 non-carcinogenic TAP Thiram, and IDAPA 586 carcinogenic TAPs arsenic, cadmium, and formaldehyde. All facility emissions were modeled for all criteria pollutants. For each TAP with emission increases over IDEQ IDAPA ELs, emissions increases as a result of the proposed action were modeled.

Table 3 below shows the model source parameters for all model sources and all pollutants modeled.

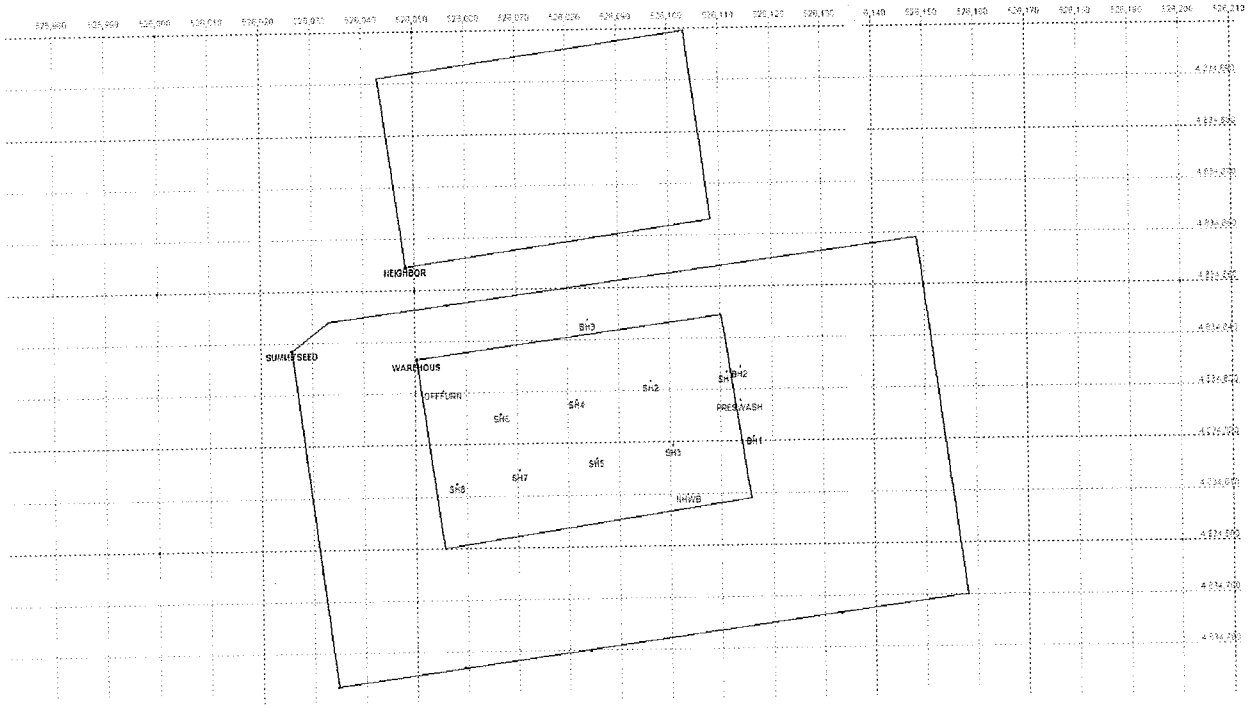
Table 3 Model Source Data

POINT SOURCES		East (X)	North (Y)	Base Elev	Stk Ht	Temp	Exit Vel	Stack Diam	NOX	PM10	Cad	As	Form	Thiram
Src ID	Src Descr	(m)	(m)	(m)	(ft)	(°C)	(fps)	(ft)	(lb/hr)					
SH1	Space Heater 1	526111.1	4834833.4	724.2	24	176.7	0.003	0.667	0.0195	0.0015				
SH2	Space Heater 2	526096.3	4834831.8	724.1	24	176.7	0.003	0.667	0.0195	0.0015				
SH3	Space Heater 3	526100.5	4834819.3	724.1	24	176.7	0.003	0.667	0.0195	0.0015				
SH4	Space Heater 4	526081.7	4834828.6	723.9	24	176.7	0.003	0.667	0.0195	0.0015				
SH5	Space Heater 5	526085.6	4834817	724	24	176.7	0.003	0.667	0.0195	0.0015				
SH6	Space Heater 6	526066.9	4834826.2	723.7	23	176.7	0.003	0.667	0.0195	0.0015				
SH7	Space Heater 7	526070.4	4834814.8	723.8	22	176.7	0.003	0.667	0.0195	0.0015				
SH8	Space Heater 8	526058.1	4834812.7	723.6	22	176.7	0.003	0.667	0.0195	0.0015				
OFFFURN	Office Furnace	526055.5	4834830.6	723.4	24	176.7	0.003	0.417	0.0195	0.0015				
NHWB	New Hot Water Boiler	526103.5	4834810.1	724.1	21.5	260	0.003	0.833	0.039	0.003	4.29E-07	7.70E-08	2.87E-05	0.00
PRESWASH	Pressure Washer	526113.8	4834827.9	724.2	3.5	232.2	0.003	0.001	1.4333	0.1008				
BH1	Baghouse 1	526116.5	4834821.1	724.3	35.5	48.9	128.44	1.667	0.2434	0.0185				
BH2	Baghouse 2	526113.8	4834834.3	724.3	35.5	48.9	128.44	1.667	0.2434	0.0185				
BH3	New Baghouse 3	526083.9	4834843.8	723.8	45	48.9	63.66	5	0.769	0.528	8.46E-06	1.54E-06	5.77E-04	1.22

Figure 1 shows the layout of the Summit facility, the model depiction of the sources and buildings within and beyond the facility, along with the facility boundary and inner fence line. All model sources are identified in red. Public access to most of the facility property is physically prevented by a fence. Access via the one boundary inside the fence is controlled via No Trespassing signs (see Figures 2-3 below).

Figure 1

Facility Emission Sources, Building, and Property Boundary / Public Access Limits



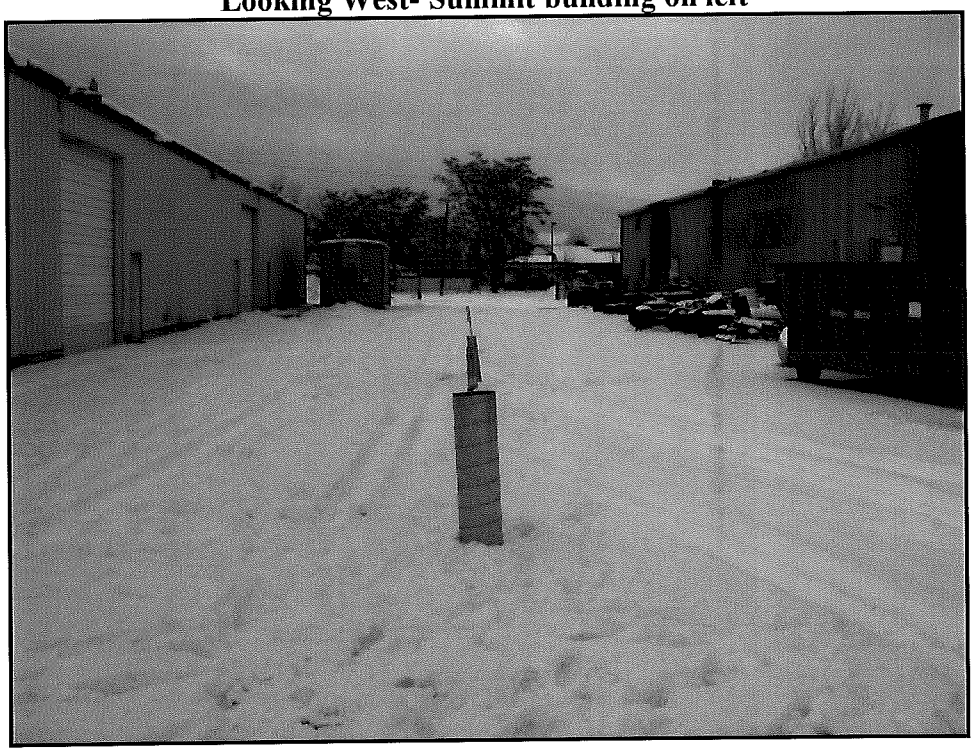
Employees are trained to discourage or report unauthorized access in the truck loading area. The grid is the NAD 27 UTM coordinates for the area, in meters. The inner receptors in this figure are spaced 10 meters apart. Facility emission sources are shown in red. The dots outside the fence line boundary represent the nearest model receptors, including the innermost of the 25-meter grid density receptors beyond the fence line.

Figure 2

No Trespassing signs marking North Boundary of Summit Seed property

Figure 3

No Trespassing signs marking North Boundary of Summit Seed property Looking West- Summit building on left



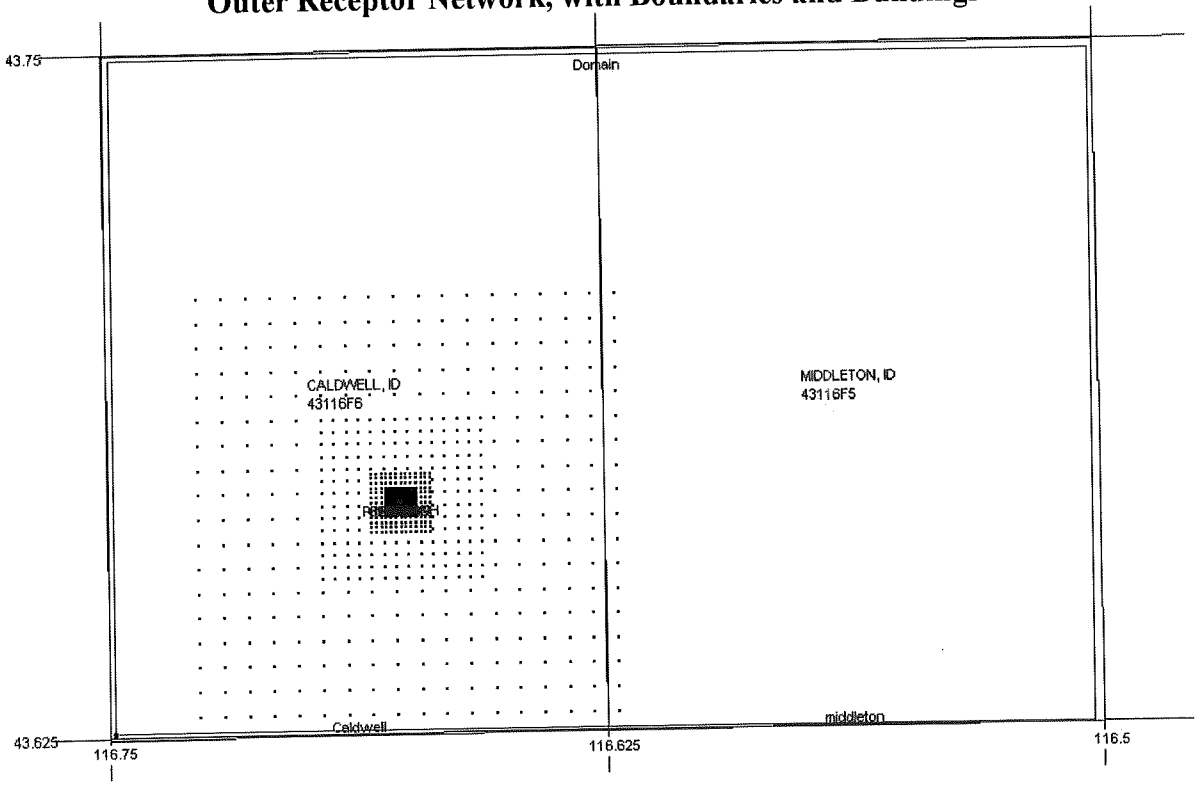
5.0 MODEL DOMAIN, MAPPING, AND RECEPTOR NETWORK

The facility shares a fence with a neighboring industrial facility to the north. The fence completely surrounds both facilities, preventing uninvited public access. That fence line was used as the ambient access boundary on all sides except the north, where the property boundary between Summit Seed and its neighbor was used as the public access boundary. On that side, Summit Seed's No Trespassing signs and staff training prevent unauthorized access.

The model receptor network used in this analysis includes 25 meter grid spacing around the fence line, 25 meter grid density for the first 75 meters beyond, 50 meter grid density out to 200 meters, 100 meter grid spacing out to 500 meters, 250 meter grid density to 1500 meters, and 500 meter grid density to 4000 meters. All model predicted maximum impacts occurred along the fence line in the area of 25 meter grid spacing.

The model domain was calculated by the BeeLine BEEST program to conservatively include nearly the entire USGS quad for any quad that elevations meeting the AERMOD guidance requirements for inclusion based upon elevation. In this analysis, that represented just two USGS quad maps, because the area and its surroundings feature generally flat terrain. The AERMAP program was used to set elevations for all model buildings, source bases, and model receptors, and to process elevation and terrain data to be ready for the AERMOD analysis. The innermost portions of the model receptor network can be seen in Figure 1. Figure 4 shows the remainder of the model receptor network, the model domain (outlined in green), and the corresponding USGS topographic map areas covered.

Figure 4
Outer Receptor Network, with Boundaries and Buildings



6.0 ELEVATION DATA

All elevation heights used in this modeling analysis were calculated from USGS NAD 27 7.5-degree (30m or less horizontal resolution) DEM data using the Bee-Line BEEST preprocessing system and the AERMAP program.

7.0 METEOROLOGICAL DATA

Five years of National Weather Service data from the Boise airport, from 1988 to 1992, was used. The meteorological data was in a single five year file prepared and provided by IDEQ, who recommended it for this type of application.

8.0 LAND USE CLASSIFICATION

The model includes rural and urban algorithm options. These options affect the wind speed profile, dispersion rates, and mixing-height formula used in calculating ground-level pollutant concentrations. A protocol was developed by USEPA to classify an area as either rural or urban for dispersion modeling purposes. The classification is based on average heat flux, land use, or population density within a three-km radius from the plant site. Of these techniques, the USEPA has specified that land use is the most definitive criterion (USEPA, 1987). The urban/rural classification scheme based on land use is as follows:

The land use within the total area, A_0, circumscribed by a 3-km circle about the source, is classified using the meteorological land use typing scheme proposed by Auer (1978). The classification scheme requires that more than 50% of the area, A_0, be from the following land use types in order to be considered urban for dispersion modeling purposes: heavy industrial (I1); light-moderate industrial (I2); commercial (C1); single-family compact residential (R2); and multi-family compact residential (R3). Otherwise, the use of rural dispersion coefficients is appropriate.

The facility is located in a small low rise industrial area on the northeast side of Caldwell. The majority of the three kilometer circle would include more low-rise industrial, residential and agricultural land uses than anything with urban development to justify the urban dispersion algorithm designed for urban wind channeling and heat island effects. Rural dispersion coefficients were therefore used in the air quality dispersion modeling.

9.0 BACKGROUND CONCENTRATIONS

Conservative draft background concentrations provided by Darrin Mehr of IDEQ for Canyon County were added to model predicted NO_x impacts to assess maximum NO_x concentration with facility operations. The IDEQ-recommended NO_x background values can be seen in Table 4 below.

10.0 EVALUATION OF COMPLIANCE WITH STANDARDS

The ambient air quality impact limits applicable to this analysis for criteria pollutants are the National Ambient Air Quality Standards and the IDAPA standards which match them for PM-10 and NO_x, and the IDAPA 58.01.01.585 and 586 AACs and AACCs for the TAPs. The maximum potential ambient concentration compared against applicable impact limits was the maximum model predicted impact at any receptor in any year for all annual average periods and all TAP analyses, and conservatively the highest model predicted second maximum over five years for the 24-hour average PM-10 analysis. Background concentrations were added to predicted maximum criteria impacts to compare maximum total operational concentrations against the NAAQS.

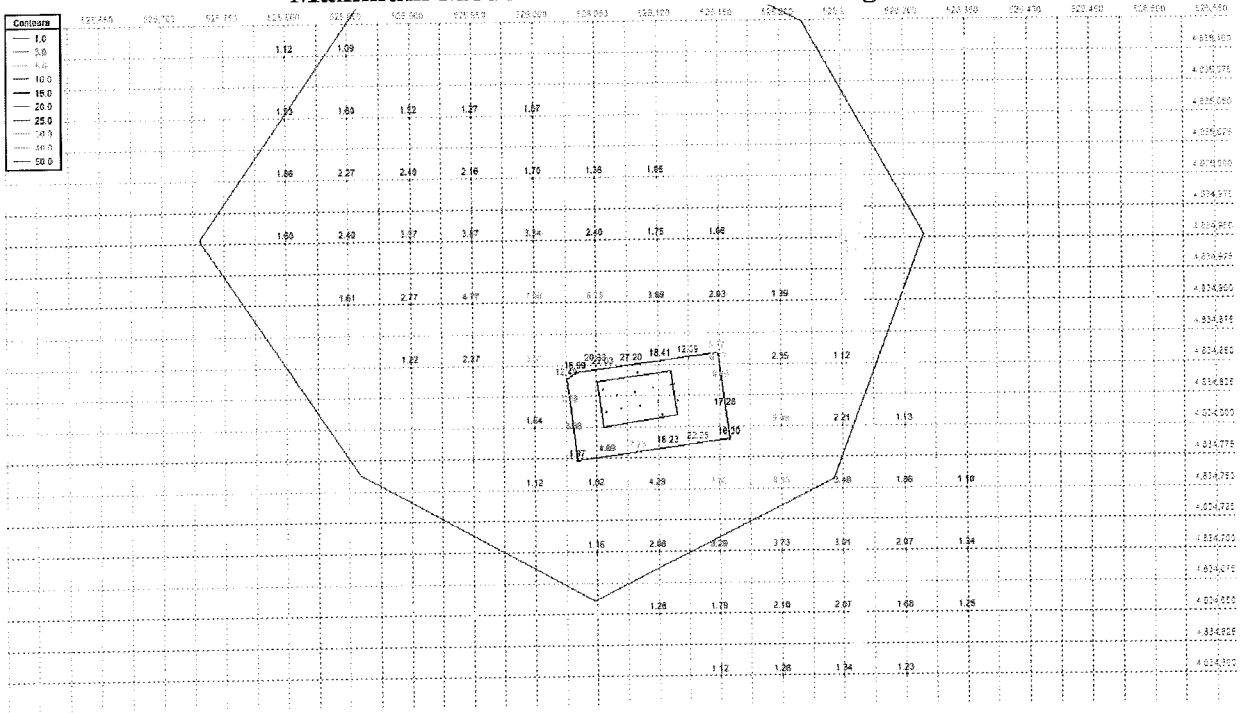
Table 4
Ambient Impact Limits & Comparison of Predicted Impacts with Applicable Ambient Standards

Pollutant	Averaging Period	Background Conc. ($\mu g/m^3$)	Modeled Worst Case Impact ($\mu g/m^3$)	Max Pot. Ambient Conc. ($\mu g/m^3$)	NAAQS ($\mu g/m^3$) Or AAC, AACC for TAPs	Impact as % of Impact Limit	Location Of Highest Model Impact
NOx	Annual	32	27.2	59.2	100	27.2%	N property boundary
PM-10	24-hour	94	9.1	103.1	150	6.1%	N property boundary
	Annual	30	3.2	33.2	50	6.4%	N property boundary
Thiram	24-hour	-	13.0	-	250	5.2%	S fence line
Arsenic	Annual	-	0.00001	-	0.0023	0.4%	S fence line
Cadmium	Annual	-	0.00004	-	0.00056	7.1%	S fence line
Formaldehyde	Annual	-	0.00223	-	0.077	2.9%	S fence line

Maximum predicted annual average impacts for all pollutants occurred along the fence line. Only one pollutant, NO_2, had maximum predicted impacts greater than 8% of allowable levels. This analysis conservatively assumes all NO_x emitted is NO_2, and remains NO_2 despite typical assumptions that 25% of the emitted NO_x is not NO_2. Maximum NO_2 impacts are strongly influenced by building downwash, and drop off by an order of magnitude within 500 meters of the fence line.

Figure 5 below shows the predicted maximum ambient annual average NO_2 impacts. The very few receptors with maximum predicted impacts over the 1 ug/m3 significant impact levels are shown in bold. Note that significant impacts are within 750 meters of the facility's ambient air boundary.

Figure 5
Maximum Model Predicted Annual Average NO_2



11.0 ELECTRONIC COPIES OF THE MODELING FILES

Electronic copies of all input, output, and support modeling files necessary to duplicate the model results are provided with the modeling report on the accompanying zipped file.

APPENDIX E

PUBLIC MEETING NEWSPAPER ANNOUNCEMENT

AL NOTICES

'23/2005, under Instru- 200515219, Mortgage re- anyon County, Idaho, the interest in which is pres- by Wells Fargo Bank, Association, as Trustee Bank USA, NA 2005- above Grantors are comply with Section 45-), Idaho Code. No repre- is made that they are, or presently responsible for ation. The default for ale is made is the failure en due under the Deed of e dated 3/15/2005, the payment which became 3/1/2007 and all subse- nthly payments, plus late nd other costs and fees h. Amount due as of De- 9, 2007 Delinquent Pay- n August 01, 2007 1 pay- $1,010.67 each $1,010.67 nts at $995.13 each 2 payments at $1,059.03 18.06 (08-01-07 through Late Charges: $188.63 y Advances: $188.77 Credit: $-681.43 Total: All delinquencies are together with unpaid and axes, assessments, trust- , attorney's fees, costs nces made to protect the ssociated with this fore- The principal balance is 4, together with interest t 8.875% per annum from to 9/1/2007, 8.875% per om 9/1/2007 to 11/1/2007, er annum from 11/1/2007, . The Beneficiary elects to use the trust property to to satisfy said obligation. aving any objection to the any grounds whatsoever fforded an opportunity to as to those objections if g a lawsuit to restrain the ated: 12/19/2007 Pioneer Trustee Services, LLC By Amy L. Bowles, Assis- st Officer c/o Regional Services Corporation, 616 ue, Suite 500, Seattle, WA hone: (206) 340-2550 Sale on: w.rtrustee.com ASAP# 01/08/2008, 01/15/2008, 08, 01/29/2008 y 8, 15, 22, 29, 2008 06555593

E OF TRUSTEE'S SALE

Summit Seed Coatings to hold a meeting.

Summit Seed Coatings will hold an informational meeting in accordance with Idaho regulations on Jan. 18 at the La Quinta Inn off exit 29, Interstate 84, in Caldwell at 1 p.m.

The purpose of the meeting will be to discuss a Permit to Construct application for building and operating an additional seed coating line at their existing facility.

January 8, 2008 06555627

NOTICE OF PUBLIC FUNDS HEARING STATUS OF FUNDS

The City of Greenleaf, Idaho applied for and received an Idaho Community Development Block grant (ICDBG) in the amount of $250,000. The ICDBG funds, along with matching local resources, have been dedicated to developing the City's municipal water system.

A public hearing has been scheduled before the City of Greenleaf City Council at 7:00 p.m. on January 15, 2008 at Greenleaf City Hall, 20523 Whittier, Greenleaf ID 83626. This facility is accessible to persons with disabilities. Persons with disabilities needing reasonable accommodations in order to attend will be provided upon advance request to Lee Belt, at the City of Greenleaf's City Clerk's Office by calling (208) 454-0552.

The public hearing will include a review of project activities and accomplishments to date; a summary of all expenditures to date; a general description of the remaining work; and any changes made to the scope of work, budget, schedule, locations, objectives, and/or beneficiaries. Written and verbal comments will be accepted for five (5) days after the date of this public hearing.

January 8, 2008 08510932

NOTICE OF TRUSTEE'S SALE

Trustee's Sale No. 02-FMG-52384 Notice is hereby given that, Pioneer Lender Trustee Services, LLC, the duly appointed Successor Trustee, will on April 30, 2008, at the hour of 11:00 AM, of said day, In the office of Pioneer Title Company, 610 South Kimball Avenue, Caldwell, ID, sell at public auction

AMENDED NOTICE OF HEARING FOR CHANGE OF NAME

CASE NO. CV 07-11146

IN THE DISTRICT COURT OF THE THIRD JUDICIAL DISTRICT IN AND FOR THE STATE OF IDAHO, COUNTY OF CANYON

In The Matter Of The Application Of: JIMMY MAYES, Petitioner, For Change Of Name

An Amended Petition by JIMMY MAYES, AKA; JAMES SALINAS RODRIGUEZ, who was born at Nampa, Idaho, whose date of birth is December 13, 1945, and who is now residing at 4619 South Powerline Road, Nampa, Idaho, proposing a change of name to JAMES SALINAS RODRIGUEZ, has been filed in the above-entitled Court, the reason for the change of name being that the petitioner has been using the name JAMES SALINAS RODRIGUEZ since he was eighteen (18) years old, this is the name friends and family know him by, and it is his wish to legally change his name before he retires.

The Petitioner's father is deceased, and the names and addresses of petitioner's nearest relatives are; Uncle; RICHARD S. RODRIGUEZ, 1804 4th Street North, Nampa, Idaho 83687, and Brother, RUBEN R. RODRIGUEZ PO BOX 721, Neskowin, Oregon 97149.

Such Petition will be heard at 9:00 A.M., Jan 31, 2008, at the Canyon County Courthouse in Caldwell, Idaho, and objections may be filed by any person who can, in such objections, show to the Court a good reason against such a change of name.

WITNESS MY HAND AND SEAL OF SAID DISTRICT COURT this 20 day of Dec, 2007

CLERK
By: JVASKO Deputy Clerk

December 26, 2007
January 2, 9, 16, 2008 06555388

NOTICE OF SHERIFF'S SALE
Case No. CV 07-10775

IN THE DISTRICT COURT OF THE THIRD JUDICIAL DISTRICT OF THE STATE OF IDAHO IN AND FOR THE COUNTY OF CANYON

Notice of Trustee's Sale Idaho Code 45-1506 Today's date: December 12, 2007 File No.: 7301.23524 Sale date and time (local time): April 14, 2008 at 11:00 AM Sale location: in the lobby of Pioneer Title Company, 610 South Kimball, Caldwell, ID 83605 Property address: 9029 Ridge Point Lane Nampa, ID 83686 Successor Trustee: Northwest Trustee Services, Inc., an Idaho Corporation P.O. Box 997 Bellevue, WA 98009 (425) 586-1900 Deed of Trust information Original grantor: Daniel Bodily and Annette Bodily, husband and wife Original trustee: Landamerica Transnation Original beneficiary: Mortgage Electronic Registration Systems, Inc., solely as nominee for Silver State Financial Services, Inc dba Silver State Mortgage Recording date: August 10, 2006 Recorder's instrument number: 200665288 County: Canyon Sum owing on the obligation: as of December 12, 2007: $538,967.40 Because of interest, late charges, and other charges that may vary from day to day, the amount due on the day you pay may be greater. Hence, if you pay the amount shown above, an adjustment may be necessary after we receive your check. For further information write or call the Successor Trustee at the address or telephone number provided above. Basis of default: failure to make payments when due. Please take notice that the Successor Trustee will sell at public auction to the highest bidder for certified funds or equivalent the property described above. The property address is identified to comply with IC 60-113 but is not warranted to be correct. The property's legal description is: Parcel I: This parcel is a portion of the Southwest quarter of the Southwest quarter of Section 13, Township 2 North, Range 3 West, Boise Meridian, Canyon County, Idaho, and is more particularly described as follows: Commencing at the Southwest corner of said Southwest quarter of the Southwest quarter; thence North 00 degrees 35'09" East along the West boundary of said Southwest quarter of the Southwest quarter, a distance of 40.00 feet; thence South 89 degrees 30'35" East, parallel with the South boundary of said Southwest quarter of the Southwest quarter, a distance of 451.88 feet to the True Point of Beginning; thence North 00 degrees 35'50" East, a distance of 200.00 feet;

Another Notice of Hearing on Name Change

Case No. CV07-12179

A Petition to change the name of Linda Lee Clement, born 12/18/1971, in Tucson, AZ, residing at 88 N Grant St, Nampa, ID, has been filed in Canyon County District Court, Idaho. The name will change to Linda Lee Hammond, because of divorce (return to maiden name). The petitioner's father is living and his address is 16770 Hollow Rd Caldwell ID 83607 and the petitioner's mother is living and her address is 16770 Hollow Rd Caldwell ID 83607,

A hearing on the petition is scheduled for 9:30 o'clock am. on Jan 24th, 2008, at the County Courthouse. Objections may be filed by any person who can show the court a good reason against the name change.

Date: Dec 13 2007
By: P.SALAS
Deputy Clerk

December 18, 25, 2007
January 1, 8, 2008 02525821

NOTICE OF TRUSTEE'S SALE

TS No. 07-55365 Title Order No. W731849 Parcel No. R 912000 0 The following described property will be sold at public auction to the highest bidder, payable in lawful money of the United States, 'In of the office of Pioneer Title Company located at 610 South Kimball Avenue, Caldwell, ID, 83605, on 04/22/2008 at 11:00 am, (recognized local time) for the purpose of foreclosing that certain Deed of Trust recorded 02/20/2007 as Instrument Number 2007012097, and executed by DAVID CLAUSEN, A MARRIED MAN, as Grantor(s), in favor of MORTGAGE ELECTRONIC REGISTRATION SYSTEMS, INC., as Beneficiary, to RECONTRUST COMPANY, the Current Trustee of record, covering the following real property located in Canyon County, state of Idaho: Beginning at the Southwest corner of Lot 10 in vacated Block 17, College Heights Addition, Caldwell, Canyon County, Idaho, according to the plat filed August 24, 1909, in Book 3 of Plats at Page 7, records of said County; thence North along the West line 60 feet; thence East 100 feet to a point in Lot 7, 19 feet, more or less, East of the West line of Lot 7; thence South 60 feet; thence West 100 feet to the Point

NOTICE OF TRUSTEE'S SA

NOTICE IS HEREBY GIVEN on May 8, 2008, at the hour o'clock a.m. of said day, at the ces of the Trustee, Alliance Ti Escrow Corp., 717 S. Kimball nue, Caldwell, Canyon County, ho, said Trustee will sell at p auction to the highest bidder cash in lawful money of the U States of America, all payabl the time of sale, the following scribed real property situated i County of Canyon, State of Id and described as follows, to-wit

See attached Exhibit "A'

EXHIBIT A

All of Government Lot 3 Section 2, Township 1 Nort Range 3 West of the Boi Meridian, Canyon Coun Idaho described as:

Beginning at the Nor Quarter corner of Section Township 1 North, Range West of the Boise Meridia Canyon County, Idaho, a running thence Sou 89°24'53" West 1325.60 fe along the North line of sa section to the Northwest co ner of said Lot 3; then South 00°10'36" West alo the West line of Said Lot 3, distance of 1268.39 feet to t Southwest corner of said L 3; thence North 89°54'4 East along the South line said Lot 3 a distance 1325.57 feet to the Southea corner of said Lot 3; then North 00°10'24" East alo the East line of said Lot 3, distance of 1279.92 feet to t point of Beginning.
(Known as Parcel J.)

SUBJECT TO AND T GETHER WITH:

A 60 foot wide ingres egress and irrigation eas ment along the South side the above described prope and which lies 30 feet ea side of the following describ centerline.

COMMENCING at t Northeast corner of Section Township 1 North, Range West of the Boise Meridia Canyon County, Idaho a running thence

APPENDIX F

MATERIAL SAFETY DATA SHEETS

Name of Material	Manufacturer	MSDS Sheet Date
Calcium Carbonate White (Limestone)[a]	Columbia River Carbonates	2004
Calcium Carbonate Grey (Limestone)	J.A. Jack & Sons, Inc.	2004
Calcium Sulfate (Gypsum)[b]	Diamond K, Inc.	2007
Peat Based Inoculant[c]	EMD/ Nitragen Co.	2003
Polyvinyl Alcohol[d]	Kell Chemical	2007
Mica (Gimsheen 40)[e]	Georgia Industrial Minerals, Inc	2005
Maxim 4FS Fungicide[f]	Syngenta	2001
Sodium Molybdate[g]	North Metal & Chemical	2005
42-S Thiram Fungicide[h]	Bayer CropScience	2007
Apron XL LS	Syngenta	2004
Potassium Sulfate (Sulfate of Potash)	Diamond K, Inc.	2007
RCD9000 Red Colorant	Sun Chemical	2007
Bolster Plant Growth Supplement	Natural Fertilizer of America, Inc.	2003
Horta-Sorb	Horticultural Alliance, Inc.	2006
Borrechel FE 853 Powder	LignoTech USA, Inc	2006
Optimize Gold	EMD Crop BioScience	2007
Zeba	Absorbent Technologies, Inc.	2006
Color Coat Yellow	Becker Underwood, Inc.	2003
Color Coat Blue	Becker Underwood, Inc.	2007
Color Coat Green	Becker Underwood, Inc.	2007

COLUMBIA RIVER CARBONATES
P.O. Box 2350 – 300 North Pekin Road
Woodland, Washington 98674
TEL: (360) 225 – 6505
FAX: (360) 225 – 5082
WATTS: (800) 735 – 6690

Material Safety Data Sheet

MANUFACTURER: COLUMBIA RIVER CARBONATES
PRODUCT: CALCIUM CARBONATE, LIMESTONE
EMERGENCY PHONE: 1-800-735-6690

SECTION 1 – PRODUCT IDENTIFICATION

MATERIAL DESCRIPTION: Calcium Carbonate, Limestone

TRADE NAMES: Microna 2, Microna 3, Microna 7, Microna 10, Microna 50, BP 200, Micronatex, Micronatex Fines, Micronatex 40M, Microna 2240, Microna Linemarker, Mill Feed (WMF), Agricultural Lime, Deco Rock.

CHEMICAL NAME: Calcium Carbonate ($CaCO_3$)

CAS #: 1317 - 65 - 3

SECTION 2 – HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM:

CATEGORY	RATING
Health Hazard	**1**
Flammability Hazard	**0**
Reactivity Hazard	**0**
Maximum Personal Protection	

HAZARDOUS COMPONENTS:

INGREDIENTS	PERCENTAGE W/W	CAS#	EXPOSURE LIMITS	
Limestone	>97.0	1317 – 65 – 3	ACGIH TLV: OSHA PEL:	Total dust 10 mg/m^3 TWA Total dust 15 mg/m^3 TWA Respirable dust 5 mg/m^3 TWA
Silica Quartz	<1.0	14808 – 60 – 7	ACGIH TLV: OSHA PEL:	0.1 mg/m^3 respirable TWA 0.1 mg/m^3 respirable TWA

Typical levels of respirable silica are below 0.3% ($^{w}/_{w}$) in these products. However, these products contain more than 0.1% (w/w) of crystalline silica, but no more than 1%. These limestone products also contain trace amounts of materials regulated under California's Safe Drinking Water and Toxic Enforcement Act. These materials and their typical levels are: Arsenic 0.4 ppm; Lead < 3 ppm; Cadmium 2 ppm.

SECTION 3 – PHYSICAL DATA

APPEARANCE AND ODOR: Dry: Fine white powder – no odor.

SOLUBILITY IN WATER: 0.0014 g/100 ml @ 25 degrees Celcius.

SPECIFIC GRAVITY (of solids) 2.71 g/ml.

SECTION 4 - FIRE & EXPLOSION DATA

FLASH POINT: Non-Flammable.
EXTINGUISHING MEDIA: Not Applicable.
SPECIAL FIRE FIGHTING PROCEDURES: None.
UNUSUAL FIRE & EXPLOSION HAZARDS: None.

SECTION 5 – REACTIVITY DATA

STABILITY:	Material is stable.
INCOMPATIBILITY:	Reacts with strong acids and liberates carbon dioxide.
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	None.

SECTION 6 – HEALTH HAZARD DATA

ROUTES OF ENTRY: Inhalation and Ingestion.

ACCUTE EFFECTS: Mild irritation to the eyes or the respiratory tract can occur due to exposure to nuisance dust above the T.L.V.

CHRONIC EFFECTS: There are no known chronic health effects associated with high-purity limestone. Chronic exposure to any nuisance dust may cause respiratory problems. These products contain cyrstalline silica (quartz) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding occupational exposure limits may increase the risk of developing a disabling lung disease called silicosis. IARC has concluded that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz from occupational sources.

CARCINOGENICITY: Limestone is not listed as a carcinogen by OSHA, NTP, or IARC.

EMERGENCY & FIRST AID PRODUCEDURES:

Eyes:	Flush thoroughly with water. If irritation persists, seek medical attention.
Skin:	Wash with mild soap and water.
Inhalation:	Remove to fresh air.
Ingestion:	Ingestion should not cause any significant health problems. If a large amount is ingested and if victim is conscious, give large quantities of water to drink. Seek medical attention.

SECTION 7 – PRECAUTIONS FOR SAFE HANDLING AND USE

SPILL PROCEDURES: Use respiratory protection during cleanup activities. Sweep or shovel material into disposable containers. If permitted by local regulations, flush remaining amount of material to sewer with large quantities of water.

WASTE DISPOSAL METHOD: Calcium carbonate is not considered to be a RCRA hazardous waste and may be disposed in a site suitable for industrial wastes.

HANDLING AND STORAGE: Dry: Store bags in cool dry place, isolate from incompatible materials. Minimize airborne dust at material handling stations.

SECTION 8 – CONTROL MEASURES

RESPIRATORY PROTECTION: Wear NIOSH / OSHA approved nuisance dust respirator if exposure above T.L.V. occurs.

PROTECTIVE GLOVES: Dry: Not required.

EYE PROTECTION: Wear goggles or safety glasses if exposure above T.L.V. occurs or if material is subject to splashing.

VENTILATION: Provide adequate ventilation to limit nuisance dust below T.L.V.

Prepared by: Dr. Jose Rodriguez – June 2004
Reviewed –July 2004

"Grey limestone"

Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910 1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY *(as Used on Label and List)*
Imperial Limestone Products

Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's name
J. A. Jack & Sons, Inc.

Address *(Number, Street, City, State and ZIP Code)*
5427 Ohio Ave., South
Seattle, Washington 98134

Emergency Telephone Number
206-762-7622

Telephone Number for Information
206-762-7622

Date Prepared 8/15/04

Signature of Preparer *(optional)*

Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Limestone ($CaCO_3$) is not considered a hazardous material.				
May contain crystalline silica, quartz (impurity)				>.1%

Section III—Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H_2O = 1)	2.7 - 2.9
Vapor Pressure (mm Hg)	N/A	Melting Point oxidizes before melting point	
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A

Solubility in Water 1.3 @ 20 degrees C

Appearance and Odor white to gray powder

Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used) Non-combustible	Flammable Limits	LEL	UEL

Extinguishing Media Any

Special Fire Fighting Procedures None

Unusual Fire and Explosion Hazards None

(Reproduce locally)

Section V—Reactivity Data

Stability	Unstable		Conditions to Avoid None, other than strong acids.
Stable under normal conditions	Stable X		

Incompatibility *(Materials to Avoid)* Strong acids.

Hazardous Decomposition or Byproducts

Hazardous Polymerization None	May Occur		Conditions to Avoid None.
	Will Not Occur X		

Section VI—Health Hazard Data

Route(s) of Entry Inhalation? Skin? Ingestion?

Health Hazards *(Acute and Chronic)*

Dust may cause mechanical irritation to eyes and skin. Causes respiratory tract irritation if inhaled.

Carcinogenicity NTP? IARC Monographs? OSHA Regulated?

This product contains greater than 0.1% crystalline silica which is listed as a Group 1 carcinogen by IARC, a known carcinogen by NTP, OSHA and as A2 suspected human carcinogen by ACGTH.

Signs and Symptoms of Exposure Dust may cause mechanical irritation to eyes and skin. Causes respiratory tract irritation if inhaled.

Medical Conditions Generally Aggravated by Exposure May aggravate existing respiratory irritation.

Emergency and First Aid Procedures Eye contact - flush eyes with a steady, gentle stream of water for several minutes.

Skin contact - wash with soap and water. Ingestion - rinse mouth with water.

Section VII—Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled This product does not present any particular risk to the environment.

Waste Disposal Method Dispose of if accordance with local, state and national regulations.

Precautions to Be Taken in Handling and Storing Store in dry area and protect packages from physical damage.

Other Precautions Avoid nuisance dust formation.

Section VII—Control Measures

Respiratory Protection *(Specify Type)* In case of exposure to high levels of airborne dust, wear a personal respirator to counter nuisance dust.

Ventilation	Local Exhaust Provide appropriate exhaust ventilation at places where dust is formed.		Special
	Mechanical *(General)*		Other
Protective Gloves Not required.		Eye Protection Safety glass with side shields.	

Other Protective Clothing or Equipment None required, other than for protection from nuisance dust.

Work/Hygienic Practices Handle in accordance with good industrial hygiene and safety practices.

DIAMOND K

MATERIAL SAFETY DATA SHEET

DIAMOND K, INC.
1720 REDHILLS DRIVE
RICHFIELD, UTAH 84701
BUSINESS: 435-896-8870

24 - HOUR
EMERGENCY ASSISTANCE
CHEMTREC 1-800-424-9300

PRODUCT	GYPSUM	PRODUCT CODE	AB3A002
MANUFACTURER	DIAMOND K GYPSUM, INC.	ADDRESS	1720 REDHILLS DRIVE RICHFIELD, UTAH 84701
TRADE NAME	DKG TERRA ALBA DKG TURF & ORNAMENTAL DKG PREM 97 SOLUTION GRADE	GENERIC NAME	GYPSUM
CHEMICAL NAME	CALCIUM (II) SULFATE DIHYDRATE	CHEMICAL FAMILY	HYDRATED SULFATE NATURAL MINERAL
MSDS CODE NO.	A1980AB3A002	CAS REGISTRY NO.	10101 - 41 - 4
NIOHE REGISTRY	EW415000	CHEMICAL FORMULA	CAS04*(2)H2O M.P. 1450° C S.G. 2.3-2.9
HEALTH & PHYSICAL HAZARDS	THIS MINERAL IS NOT HAZARDOUS AS DEFINED BY OSHA, MATERIAL DUSTS ARE CLASSIFIED AS NUISANCE PARTICULATES. EXPOSURE TO THESE DUSTS MAY CAUSE IRRITATION TO THE EYES, EARS, NOSE, THROAT, AND UPPER RESPIRATORY TRACT. MATERIAL HAS NO KNOWN CARCINOGENIC INGREDIENTS OR EFFECTS.		
EXPOSURE LIMITS	NUISANCE PARTICULATES, 8-HR 10 mg/m3, AS PER ACGIH		
EYES	THIS MATERIAL MAY CAUSE EYE IRRITATION . CONTACT WITH THIS MATERIAL OR ITS DUST MAY CAUSE MECHANICAL ABRASION WITH BURNING, TEARING AND REDNESS EYE PROTECTION (GOGGLES) MAY BE NEEDED TO AVOID PARTICULATE IRRITATION TO EYES		
SKIN	THIS MINERAL MAY CAUSE MINOR SKIN IRRITATION. PROLONGED OR REPEATED CONTACT WITH THIS MATERIAL OR ITS DUSTS MAY CAUSE MECHANICAL ABRASION WITH ITCHING, BURNING AND REDNESS. GLOVES OR PROTECTIVE CLOTHING ARE USUALLY NOT NECESSARY BUT MAY BE DESIRABLE FOR SPECIFIC WORK CONDITIONS.		
RESPIRATORY	EXPOSURE TO EXCESSIVE CONCENTRATIONS OF DUST MAY CAUSE IRRITATION OF THE NOSE, THROAT AND UPPER RESPIRATORY TRACT. WHEN DUSTY CONDITIONS EXIST, WEAR AN APPROVED NIOSH DUST MASK TO GUARD AGAINST NUISANCE PARTICLES.		
SWALLOWING	ACCIDENTALLY SWALLOWING THIS MATERIAL CAN CAUSE MINOR UPSET STOMACH AND INTESTINAL IRRITATION.		
PHYSICIAN INFORMATION	THIS MATERIAL IS A NATURALLY OCCURRING MINERAL AND IS NOT TOXIC. EXPOSURE TO DUSTS CAN CAUSE ABRASION AND IRRITATION. PRIMARY ROUTE OF ENTRY IS INHALATION AND TARGET ORGANS ARE THE LUNGS.		
EMERGENCY AND FIRST AID PROCEDURES	EYES: FLUSH WITH WATER TO REMOVE PARTICLES. IF IRRITATION CONTINUES SEE A PHYSICIAN. SKIN: WASH WITH WATER INHALATION: REMOVE TO FRESH AIR INGESTION: NONE KNOWN		
COMBUSTION EXPLOSION	THIS MATERIAL IS NOT COMBUSTIBLE		
FIRE	THIS MATERIAL IS NOT COMBUSTIBLE		
SPECIAL PRECAUTIONS	KEEP OUT OF THE REACH OF CHILDREN		
SPILLS LEAKS DISPOSAL	WEAR RECOMMENDED PROTECTIVE EQUIPMENT AND CLOTHING AND PROVIDE ADEQUATE VENTILATION. SWEEP UP OR VACUUM SPILLS. THIS MATERIAL CAN BE DISPOSED OF AS AN INERT SOLID ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.		

RHIZOBIUM INOCULANTS (PEAT)
MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT & COMPANY IDENTIFICATION

Material Names: **NITRAGIN® Inoculants**
PEANUT SPECIAL®
SOIL IMPLANT®
SOY SELECT™, NITRASTIK™

Other Designations: Peat-based inoculant products containing live cultures of nitrogen-fixing Rhizobium bacteria

Chemical Formula: Mixture

Manufacturer: Nitragin®, Inc.
3101 W. Custer Ave., Milwaukee, WI 53209

Emergency Telephone: 414-462-7600
Monday-Friday, 8:00 am - 4:30 pm CST

After Hours: Call CHEMTREC at 1-800-424-9300

SECTION 2 INGREDIENT INFORMATION

Hazardous Ingredient:	CAS Number:	OSHA PEL:	ACGIH TLV:
crystalline quartz	14808-60-7	10 mg/m^3	0.1 mg/m^3

(Small amounts of quartz are a naturally-occurring component of the carrier substrate)

Contains naturally-occuring, non-pathogenic Rhizobium bacteria on a carrier substrate of sedge peat. These are symbiotic nitrogen-fixing bacteria, to be applied as a seed treatment or in-furrow at seed planting, to specific legume crops (not a plant food product). See product label for specific crop information, application rates and methods. Not for food, feed or drug use.

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview: There are no known health effects caused by the Rhizobium bacteria contained in this product.

Primary Entry Routes: Oral (swallowing), inhalation

Acute Effects (Signs and Symptoms of Overexposure):
Eyes: Dust may cause mechanical irritation of eye.
Skin: No known hazard.
Inhalation: Inhalation of large amounts of dust may cause discomfort.
Ingestion: No known hazard.

Chronic Effects: Chronic inhalation of quartz dust causes lung disease.

Medical Conditions Aggravated by Exposure: Respiratory disease.

Target Organs: Lungs

Carcinogenicity: Quartz is listed as a carcinogen by NTP and IARC.

HMIS: Health – 0, Flammability – 0, Reactivity – 0

SECTION 4 FIRST AID MEASURES

Eyes: Flush eyes with water for at least 15 minutes.

Skin: Wash with soap and water.

Inhalation: Remove person to fresh air. Get medical attention if irritation persists.

Ingestion: No treatment necessary.

SECTION 5 FIRE FIGHTING MEASURES

NFPA

Flash Point: None

Autoignition Temp.: Not determined

Explosive Limits: LEL: Not applicable
UEL: Not applicable

Extinguishing Media: Use media suitable for the surrounding fire

Unusual Fire or Explosion Hazards: None known

Fire Fighting Instructions: No special requirements.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Large Spill/Leak Procedures: Contain spill and recover for use or disposal.

Small Spills: Spilled liquid may cause slippery residue on hard floors. Flush spill area with water to wash away any slippery residue.

SECTION 7 STORAGE AND HANDLING

Storage Requirements: Store in original container in a cool, dry place. Use before expiration date printed on package.

Handling Precautions: No special handling requirements. Follow normal hygiene and housekeeping standards for agricultural products.

SECTION 8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

Ventilation: Special ventilation is not required for the normal handling and use of this product when following the label instructions.

Protective Clothing/Equipment: Dust-proof goggles are recommended when working in dusty conditions.

Respirator: Wear a dust mask when working in dusty conditions.

Contaminated Equipment: Clean application equipment with detergent and water after use.

Comments: Practice general personal hygiene after using this product. After handling any chemical or biological product,, wash arms, hands and face with soap and water before eating, drinking or smoking.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Powder or granules	**Water Solubility:**	Insoluble
Color:	Dark brown	**% Volatile (Volume):**	Not determined
Odor:	Earthy	**Specific Gravity:**	0.6
Melting Point:	Not determined	**Vapor Pressure:**	Not determined
Boiling Point:	Not determined	**Vapor Density:**	Not determined
Freezing Point:	Not determined	**pH:**	6.5 to 7.3

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable **Conditions to Avoid:** None

Hazardous Polymerization: Will not occur

Chemical Incompatibilities: Some seed-applied chemicals, including fungicides, may be harmful to the bacteria in this product..
See product label for futher information on the use of fungicides or other chemicals in conjuction with seed treatment.
Avoid contact with strong fertilizers or strong oxidizers.

Hazardous Products of Decomposition: Oxides of carbon

SECTION 11 TOXICOLOGICAL INFORMATION

Eye Effects/Eye Irritation:	Non-irritating
Acute Oral Effects:	LD_{50} (orl-rat):>5000 mg/kg
Acute Inhalation Effects:	No data available
Acute Dermal Effects:	LD_{50} (dml-rbt): >2000 mg/kg
Skin Irritation:	Non-irritating
Skin Sensitization:	Not a skin sensitizer

SECTION 12 ECOLOGICAL INFORMATION

This product contains non-pathogenic bacteria strains that occur naturally in soil, and is biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal: Small amounts of product which cannot be used according to label instructions may be disposed of in a landfill.

RCRA Waste Status: This product is not regulated as a hazardous waste. State and local regulation may affect the disposal of this product.Consult your state, local or provincial environmental agency for disposal of waste other than by use according to label instructions.

SECTION 14 TRANSPORT INFORMATION

Transportation Data: This product is not regulated as a hazardous material for all modes of transportation within the U.S.and Canada.

Hazard Class: Not applicable **ID No.:** Not applicable

SECTION 15 REGULATORY INFORMATION

TSCA: All components of this product are listed on the TSCA inventory.
SARA Section 313: Contains no reportable components.
OSHA Hazard Classification: Non-hazardous
Proposition 65: Contains no components subject to warning requirements.
WHMIS / Controlled Products Regulations: This product has been classified in accordance with the hazard criteria of the CPR and this MSDScontains all of the information required by the CPR.

SECTION 16 OTHER INFORMATION

Prepared by: D. Joers **Date:** 21 February 2003

Information presented on this Material Safety Data Sheet is believed to be accurate at the time of publication. No warranty, expressed or implied, is made with regard to this information. This information may not be adequate for every application, and the user must determine the suitability of this information due to the manner/conditions of use, storage or local regulations.

BRDF-7 Rev 1

Nch chemical

MATERIAL SAFETY DATA SHEET

1、Product and Company Identification

Product name： Polyvinyl Alcohol
Synonyms： [redacted], PVOH, PVAL
Chemical Formula： [-CH2CHOH-]n [CH2CHOOCCH3]m
Product Codes： BP28, BP26, BP24, BP22, BP20, BP20H, BP17, BP16, BP14, BP08, BP05, BP04, BP03, BP24A, BP24S, BP20S, BP17S, BP20A, BP17A, BP05A, BP17G, BP05G, BP05S, BF26, BF24, BF24H, BF24E, BF22E, BF17H, BF17, BF17E, BF17S, BF17W, BF16, BF14, BF08, BF05, BF04, BF03, BF03E, BC03H, BC04H, BC08, BC16, BC20, BC24, TS30, TP17, BP26S, BP28S
Supplier Information：Chang Chun Petrochemical Co., Ltd 301 Songkiang Road, 7th Fl., Taipei, Taiwan, 10477
Emergency phone numbers：Tel: 886-2-25038131, 886-2-25001800

2、Composition / Information on Ingredients

Ingredient	CAS Number	Percent (by weight)
Polyvinyl Alcohol	9002-89-5 (Fully hydrolyzed) 25213-24-5 (Partially hydrolyzed)	> 95%
Methyl Alcohol Methyl Acetate	Methyl Alcohol:67-56-1 Methyl Acetate:79-20-9	Methyl Alcohol:< 3% Methyl Acetate:< 1%

3、Hazards Identification

Emergency Overview：CAUTION! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR. NUISANCE DUST.
Adverse Human Health Effects： Inhalation:Dust may be formed under certain conditions of use. Treat as a nuisance dust. Ingestion:Not expected to be a health hazard via ingestion. Skin Contact:Not expected to be a health hazard from skin exposure. Eye Contact:Mechanical irritation only.
Environmental Effects： No information available
Physical and Chemical Hazards： No information available
Specific Hazards： No information available

4、First-Aid Measures

Inhalation： Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion： If large quantities of this material are swallowed, call a physician immediately. Do not induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. Get medical attention.

Classified (PNOC).
Control parameters : • Limit values : No information available • Biological Standards : No information available
Personal Protective Equipment : • Respiratory Protection : If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. • Hand Protection : NA • Eye Protection : Use chemical safety goggles. • Skin and Body Protection : Wear protective gloves and clean body-covering clothing.
Specific Hygiene Measures : No information available

9、Physical and Chemical Properties

Physical State : solid	Form : White to ivory granule or powder
Color : White to ivory	Odor : Mild odor.
pH : 5~7 (4% solution)	Boiling Point/Boiling Range : No information.
Decomposition Temperature : >220℃	Flash Point & Method Used : NONE
Auto Ignition Temperature : NONE	Explosion Properties : Minimum explosion concentration 35 g/m3. Maximum explosion pressure: 6.26 kg/cm2.
Vapor pressure : No data.	Vapor density : No data.
Density : 1.23 - 1.31	Solubility : Moderately soluble.

10、Stability and Reactivity

Stability : Stable under ordinary conditions of use and storage.
Possible Hazardous Reactions Occurring under Specific Conditions : Hazardous polymerization will not occur.
Conditions to Avoid : Heat, flame, ignition sources, dusting and incompatibles.
Materials to Avoid : Strong oxidizers.
Hazardous Decomposition Products : Complete combustion will emit carbon dioxide and water when heated to decomposition. Incomplete combustion gives in addition carbon monoxide and oxidation products, including organic acids, aldehydes and alcohol.

11、Toxicological Information

16 - Other Information

NFPA Ratings : Health: 0, Flammability: 1, Reactivity: 0
Label Hazard Warning : CAUTION! MAY FORM NUISANCE DUST.
Literature References :

Skin Contact : Wash exposed area with soap and water.
Eye Contact : Wash thoroughly with running water. Get medical advice if irritation develops.
Protection of First-aiders : No information available
Notes to Physician : No information available

5、Fire-Fighting Measures

Extinguishing Media : As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. Minimum dust cloud ignition temperature: 440℃.
Fire and Explosion Hazards : Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Minimum explosion concentration 35 g/m3. Maximum explosion pressure: 6.26 kg/cm2.
Special Firefighting Procedures : Not required.
Special Equipment for the Protection of Firefighters : In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6、Accidental Release Measures

Personal Precautions : Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.
Environmental Precautions : Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water.
Methods for Cleaning Up : Pick up spill for recovery or disposal and place in a closed container.

7、Handling and Storage

Handling : Avoid dust formation and control ignition sources. Employ grounding, venting and explosion relief provisions in accord with accepted engineering practices in any process capable of generating dust and/or static electricity.
Storage : Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Separate from incompatibilities.

8、Exposure Controls / Personal Protection

Engineering Measure : Airborne Exposure Limits OSHA Permissible Exposure Limit (PEL): 15 mg/m3 total dust, 5 mg/m3 respirable fraction for nuisance dusts. ACGIH Threshold Limit Value (TLV): 10 mg/m3 total dust containing no asbestos and < 1% crystalline silica for Particulates Not Otherwise

Acute toxicity : Oral rat LD50: > 5000 gm/kg; practically nontoxic to animals by ingestion.

Local effects : Inhalation LC50:>20.0 mg/l (rats; dust with 3-5 micron particle size; 1 hr. exposure); practically nontoxic to animals by acute inhalation exposure.
Skin:In powder form, Polyvinyl Alcohol was nonirritating to rabbit skin. In aqueous solution, slight irritation to rabbit skin was noted.

Sensitization : Not a skin sensitizer in guinea pigs when dosed as a 10% aqueous solution. Practically nontoxic to animals (LD50, rabbits: >1,000 mg/kg).
Eye: The powder and aqueous solutions are slightly irritating to rabbit eyes; irritation subsided by 48 hrs after exposure.

Chronic Toxicity or Long Term Toxicity : Polyvinyl Alcohol is not classifiable as to (its) carcinogenicity in humans".

Specific effects : No information

12、Ecological Information

Possible Environmental Effects, Behavior and Fate :
Polyvinyl alcohol exhibits low acute toxicity to aquatic species.
Fish (Pimephales promelas) 96-hr. LC50: > 40,000 ppm.
Fish (Lepomis macrochirus) 96-hr. LC50: >10,000 ppm.
Bacteria (Photobacterium phosphoreum), Microtox Method, EC50: >50,000 ppm.
Polyvinyl alcohol (PVOH) has been reported to be substantially biodegraded in several test systems after a lag time for microbial acclimation. Almost 100% degradation of 30-day BOD with a PVOH-acclimated culture can be reached.

13、Disposal Considerations

Recommended Methods for Safe and Environmentally Preferred Disposal : Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Dispose of as a non-hazardous solid waste.

14、Transport Information

International regulations : This product is not classified as dangerous goods according to the international regulations for transport by land, inland waterway, sea and air.

UN classification number : none , [redacted] is non-hazardous material according to IATA

Specific Precautionary Transport Measures and Conditions : This product is not classified as dangerous goods according to the international regulations for transport by land, inland waterway, sea and air.

15、Regulatory Information

Applicable Regulations :

Ingredient\Area	TSCA	EC	Japan	Australia
Methyl Alcohol (67-56-1)	Yes	Yes	Yes	Yes
Polyvinyl Alcohol (9002-89-5)	Yes	No	Yes	Yes

16 - Other Information

NFPA Ratings : Health: 0, Flammability: 1, Reactivity: 0
Label Hazard Warning : CAUTION! MAY FORM NUISANCE DUST.
Literature References :

Material Safety Data Sheet

Mica

C.A.S. Number: 12001-26-2
MSDS C.A.S. Code: 0520

Manufacturer: Georgia Industrial Minerals, Inc.
Address: 1132 Veal Road
City, State: Sandersville, GA
Zip Code: 31082
Telephone: 478-553-0048

HMIS RATING

HEALTH:	**0**
FLAMMABILITY	**0**
REACTIVITY:	**0**
PERSONAL PROTECTION:	**E**

Prolonged breathing of excessive dust may affect lung function. Dust mask.

Section 1 – Material Identification and Use.

Chemical Identity: Hydrous Aluminum Silicate, Wet Ground Mica.
Names: SG-(70, 75, 90, 200); OPTI- (fine, brite, sheen, sheen C, sheen F); CD-(100, 325, 800, 1600, 2200, 3200); GIMsheen(10, 20, 25, 35, 40, 50); GIMflake (20); SPS-(40, 60, 80); GIMflake(10, 20, 40, 100).
Uses: Functional filler in building materials, paints, plastics, rubber and cosmetics and personal care goods.

Section 2 – Ingredients

Ingredients	CAS No.	Approx. %	OSHA PEL mg/m^3	ACGIH TLV mg/m^3	Other
Mica	12001-26-2	>99.9%	3c	3c	n/a

C = respirable dust n/a = not available

Section 3 – Physical and Chemical Characteristics

Appearance: white to off white powder
Odor: negligible
Melting Point: Not Available
Boiling Point: Not available
Freezing Point: Not Applicable
Vapor Pressure: Not Applicable
Vapor Density: Not Applicable
Weight per Gallon: 23.52 lbs/gal.
Solubility in Water: insoluble
Evaporation Rate: Not Applicable

Section 4 – Fire and Explosion Data

Flashpoint: Not Applicable
Unusual Explosion and Fire Hazards: Not Applicable
Extinguishing Media: Dry Chemical, CO_2
Special Fire Fighting Procedures: Not Applicable

Section 5 – Physical Hazards/Reactivity

Stability: Stable
Incompatibility: Not Applicable
Hazardous Decomposition: Not Applicable
Hazardous Polymerization: Will not occur
Conditions to Avoid: Heavy Dusting

Section 6 – Health Hazard

Routes of Entry: Eyes, Inhalation, Ingestion
Acute: Coughing, possible difficulty breathing
Chronic: None
Silicon Dioxide (SiO_2) Product contains <0.1% respirable silica.
WHMIS: Not a controlled product. Not a hazardous product.
HMIS: Not a hazardous product.
Signs and Symptoms of Exposure: Persistent cough, difficulty breathing.
Medical Conditions Aggravated by Exposure: Pulmonary and Respiratory Disease.

Section 6 – Health Hazard (Continued)

Emergency and First Aid Procedures: Eyes: Flush with Generous Amounts of Water.
Respiratory: Remove person to fresh air.

Section 7 – Special Precautions and Spill/Leak Procedures

Storage and Handling: Normal Precautions to Prevent Spillage and Leakage. Avoid any rough handling that would create dusting.

Other Precautions: Use of Dust Mask in dusting applications

Spill Procedure: Avoid heavy dusting, Contain product, collect, and dispose.

Waste Disposal: Follow all applicable Local, State, and Federal Solid Waste Regulations.

Section 8 – Special Protection Information/Control Measures

Respiratory Protection: Dust Mask Recommended in Dusty Conditions

Ventilation: Provide Local Exhaust Ventilation

Protective Gloves: As needed

Eye Protection: Safety Glasses or Safety Goggles in Heavy Dust Conditions

Other Protective Equipment: Access to Safety Eyewash

The ingredients in this product are listed on the TSCA inventory and Canadian DSL.

Georgia Industrial Minerals, Inc. has created this MSDS based upon data from sources considered to be reliable. Georgia Industrial Minerals, Inc. does not guarantee the accuracy or completeness of the data and hence urges all recipients of this product to review the MSDS carefully in order to become aware of and to understand the product's hazards. The reader should consider consulting reference works or individuals who are experts in industrial safety, if questions arise.

Georgia Industrial Minerals
Certificate of Analysis

Date 10/24/2006

Customer Summit Seed Coatings

Product Gimsheen 40

Lot# 06297

BD 10.09

Mean particle size 42.27 microns

Sieve Analysis

Mesh		% retained
100	-	0.2
200	-	3.1
325	-	49.3

Brandon Lindsey
QCM

syngenta

MATERIAL SAFETY DATA SHEET

Syngenta Crop Protection, Inc.
Post Office Box 18300
Greensboro, NC 27419

In Case of Emergency, Call
1-800-888-8372

1. PRODUCT IDENTIFICATION

Product Name: **MAXIM 4FS** Product No.: A9459B

EPA Signal Word: Caution

Active Ingredient(%): Fludioxonil (40.3%) CAS No.: 131341-86-1

Chemical Name: 4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile

Chemical Class: Substituted Benzodioxalcarbonitrile Fungicide

EPA Registration Number(s): 100-758 **Section(s) Revised: 2, 8, 14**

2. HAZARDS IDENTIFICATION

Health and Environmental

Causes mild eye irritation.

Hazardous Decomposition Products

May decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Colorless liquid

Odor: Sweet, like latex paint

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Ethylene Glycol (<= 11%)	Not Established	100 mg/m³ (ceiling) [aerosol]	Not Established	No
Fludioxonil (40.3%)	Not Established	Not Established	10 mg/m³ TWA ***	No

*** Syngenta Occupational Exposure Limit (OEL)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
Syngenta Hazard Category: B

4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison contol center or doctor, or going for treatment.

Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method):	209°F	
Flammable Limits (% in Air):	Lower: Not Applicable	Upper: Not Applicable
Autoignition Temperature:	Not Available	
Flammability:	Not Applicable	

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire

Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact: Where eye contact is likely, use chemical splash goggles.

Skin Contact: Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless liquid
Odor:	Sweet, like latex paint
Melting Point:	Not Applicable
Boiling Point:	Not Available
Specific Gravity/Density:	1.22 g/cm^3
pH:	7 - 8 (1% solution in H2O @ 77°F (25°C))

Solubility in H2O

Fludioxonil: 1.8mg/l @ 77°F (25°C)

Vapor Pressure

Fludioxonil: 2.9 x 10(-9) mmHg @ 77°F (25°C)

10. STABILITY AND REACTIVITY

Stability:	Stable under normal use and storage conditions.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	None known.
Materials to Avoid:	None known.
Hazardous Decomposition Products:	May decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Practically Non-Toxic	
	Oral (LD50 Rat) :	> 5050 mg/kg body weight
Dermal:	Slightly Toxic	
	Dermal (LD50 Rabbit) :	> 2020 mg/kg body weight
Inhalation:	Practically Non-Toxic	
	Inhalation (LC50 Rat) :	> 3.77 mg/l air - 4 hours
Eye Contact:	Minimally Irritating (Rabbit)	
Skin Contact:	Non-Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

Reproductive/Developmental Effects

Fludioxonil: Delayed development at doses causing maternal toxicity.

Chronic/Subchronic Toxicity Studies

Fludioxonil: Liver and kidney toxicity at high dose levels.

Carcinogenicity

Fludioxonil: Marginal increase (7%) of liver tumors (female, rats: 3,000 ppm); Within historical control range (1 to 10%).

Other Toxicity Information

None

Toxicity of Other Components

Ethylene Glycol (<= 11%)

Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice. Exposure to high concentrations of mists or aerosols may result in effects on the hematopoietic system and central nervous system with headache, dizziness and drowsiness. Severe kidney damage results from swallowing large amounts of ethylene glycol.

Target Organs

Active Ingredients

Fludioxonil: Liver, kidney

Inert Ingredients

Ethylene Glycol: Blood, kidney, CNS

12. ECOLOGICAL INFORMATION

Summary of Effects

Fludioxonil:

Practically nontoxic to birds and bees, but highly toxic to aquatic invertebrates and fish.

Eco-Acute Toxicity

Fludioxonil:

Bees LC50/EC50 > 25 ug/bee

Invertebrate (Water Flea) LC50/EC50 0.90 ppm

Fish (Trout) LC50/EC50 0.47 ppm

Fish (Bluegill) LC50/EC50 0.74 ppm

Bird (Bobwhite Quail) 8-day dietary LC50/EC50 > 5,200 ppm

Bird (Mallard Duck) 8-day dietary LC50/EC50 > 5,200 ppm

Eco-Chronic Toxicity

Fludioxonil:

Fish (Fathead minnow) Early Life Stage MATC 0.028 mg/l

Invertebrate (Daphnia Magna) Life Cycle MATC 0.025 mg/l

Bird (Mallard Duck) Reproduction NOEC 700 ppm

Bird (Bobwhite Quail) Reproduction NOEC 125 ppm

Environmental Fate

Fludioxonil:

The information presented here is for the active ingredient, fludioxonil.
Does not bioaccumulate. Persistent in soil. Stable in water. Low mobility in soil. Sinks in water (after 24 h).

13. DISPOSAL CONSIDERATIONS

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA
Not regulated.

Air Transport - NAFTA

Not regulated.

B/L Freight Classification

Fungicides, NOIBN

Comments

Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Fludioxonil), Marine Pollutant
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III
IMDG EMS : F-A, S-F

Air Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Fludioxonil), Marine Pollutant
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III
Note: Packing Inst. 914, 5 liter inner packages; 450 liter single packages
Special Provision A97

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Ethylene Glycol (<= 11%) (CAS No. 107-21-1)

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

Report product spills >= 4,450 gal. (based on ethylene glycol [RQ = 5,000 lbs.] content in the formulation)

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health:	1	Health:	1
Flammability:	1	Flammability:	1
Instability:	0	Reactivity:	0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 4/3/2002
Revision Date: 9/12/2007 Replaces: 7/25/2006

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

Material Safety Data Sheet

NORTH METAL & CHEMICAL COMPANY
609 E. King St., P.O. Box 1904
York, PA 17405
Email: north@nmc-nic.com

For Emergency Source Information
Contact: 800/966-7848
Chemtrec: 800/424-9300
Fax: 717/846-7350
www.nmc-nic.com

Creation date: 12/08/93 Revision date: 04/02/04 Review date: 10/18/05

Section 1 - Chemical Product and Company Identification

SUBSTANCE: Sodium Molybdate Anhydrous and Dihydrate
FORM: Crystalline, Powder and Solution
TRADE NAMES/SYNONYMS: Sodium Molybdenum Oxide, Disodium Molybdate, Disodium Molybdate Dihydrate, Sodium Molybdate: Sodium Molybdate Dihydrate

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	RTECS NUMBER	PERCENTAGE
Sodium Molybdate	7631-95-0	QA5075000	100.00 as anhydrous

Section 3 - Hazards Identification

NFPA RATINGS (SCALE 0-4): Health = 1 Fire = 0 Reactivity = 0
EMERGENCY OVERVIEW: Odorless, white opaque powder or liquid.
Avoid breathing dust. Avoid contact with eyes, skin and clothing. Keep container closed. Wash after handling. Use adequate ventilation.

POTENTIAL HEALTH EFFECTS

SHORT TERM EFFECTS: Inhalation may cause irritation. May cause skin rash. May irritate eyes. Ingestion may cause vomiting, high blood pressure and coma. Additional effects from inhalation mayinclude chest pain.
LONG TERM EFFECTS: Ingestion may cause diarrhea.
CARCINOGEN STATUS:
OSHA: N
NTP: N
IARC: N

Section 4 - First Aid Measures

INHALATION: FIRST AID - Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Get medical attention.
SKIN CONTACT: FIRST AID - Remove contaminated clothing and shoes. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention.
EYE CONTACT: FIRST AID - Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention.
INGESTION: FIRST AID - If vomiting occurs, keep head lower than hips to prevent aspiration. Get medical attention if needed.

Section 5 - Fire-Fighting Measures

FIRE AND EXPLOSION HAZARD: Negligible fire hazard when exposed to heat or flame.
EXTINGUISHING MEDIA: Extinguish using agent suitable for type of surrounding fire.
FIRE FIGHTING: No acute hazard. Move container from fire area if possible. Avoid breathing vapors or dusts; keep upwind.
FIRE FIGHTING PROTECTIVE EQUIPMENT: Full fire fighting turn-out gear (bunker gear). Any supplied air respirator with full face piece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full face piece.

Section 6 - Accidental Release Measures

OCCUPATIONAL SPILL: Contain liquid or sweep up dry material and place in suitable clean, dry containers for reclamation or later disposal. Do not flush spilled material into sewer. Keep unnecessary people away.

Section 7 - Handling and Storage

STORAGE: Observe all federal, state and local regulations when storing or disposing of this substance.

Section 8 - Exposure Controls / Personal Protection

EXPOSURE LIMITS:
MOLYBDENUM, SOLUBLE COMPOUNDS (AS Mo):
5 mg/m3 OSHA TWA
0.5 mg/m3 ACGIH TWA
5 mg/m3 DFG MAK TWA (total dust)
50 mg/m3 DFG MAK 30 minute peak, average value, 1 time/shift
VENTILATION: Provide local exhaust ventilation system to meet published exposure limits.
EYE PROTECTION: Employee should wear splash-proof or dust-resistant safety goggles to prevent eye contact with this substance.
EMERGENCY EYE WASH: Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain within the immediate work area for emergency use.
CLOTHING: Employee should wear appropriate protective clothing and equipment to prevent repeated or prolonged skin contact with this substance.
GLOVES: Employee should wear appropriate protective gloves to prevent contact with this substance.
RESPIRATOR: The following respirators are recommended based on information found in the physical data, toxicity and health effects sections. They are ranked in order from minimum to maximum respiratory protection. The specific respirator selected must be based on contamination levels found in the work place, must be based on the specific operation, must not exceed the working limits of the respirator and must be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).
- Any dust, mist and fume respirator.
- Any chemical cartridge respirator with a dust, mist and fume filter.
- Any powered air-purifying respirator with a dust, mist and fume filter.
- Any type 'c' supplied-air respirator with a full face piece operated in pressure-demand or other positive pressure mode or with a full face piece, helmet or hood operated in continuous-flow mode.
- Any self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode.

Section 9 - Physical and Chemical Properties

DESCRIPTION: Odorless, white opaque powder or clear solution.
MOLECULAR WEIGHT: 205.97 (anhydrous), 241.948 (dihydrate)
MOLECULAR: Na_2MoO_4 (anhydrous) $Na_2MoO_4 \times 2H_2O$ (dihydrate)
BOILING POINT of Solution: 105°C
FREEZING POINT of Solution: -4°C (25°F)
MELTING POINT of Anhydrous: 687° C

Section 10 - Stability and Reactivity

REACTIVITY: Stable under normal temperatures and pressures.
CONDITIONS TO AVOID: May burn but does not ignite readily. Avoid contact with strong oxidizers, excessive heat, sparks or open flame.
INCOMPATIBILITIES: None identified.
HAZARDOUS DECOMPOSITION: Thermal decomposition products may include toxic sodium oxide.
POLYMERIZATION: Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

Section 11- Toxicological Information

SODIUM MOLYBDATE:

TOXICITY DATA

ANHYDROUS: >2080 mg/m3/4 hours inhalation-rat LC50; 4000 mg/kg ORAL-RAT LD50; 570 mg/kg subcutaneous-mouse LD50; 917 mg/kg intravenous-cat LD50; 303 mg/kg intraperitoneal-mouse LD50; 576 mg/kg intraperitoneal-rat LD50; mutagenic data (RTECS); reproductive effects data (RTECS).
DIHYDRATE: 520 Mg/Kg Intraperitoneal-rat LD50; 257 mg/kg intraperitoneal-mouse LD50; Reproductive effects data (RTECS).
CARCINOGEN STATUS: None
ACUTE TOXICITY LEVEL: Moderately toxic by ingestion.

TARGET ORGANS: No data available.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Blood system problems, bone, joint or tooth problems, respiratory problems.

MUTAGENIC DATA: Phange inhibition capacity - Escherichia coli 16 mmol/L; sex chromosome Loss and non disjunction - Saccharomyces cerevisae 80 mmol/L
REPRODUCTIVE EFFECTS DATA: 16474 ug/kg intratesticular - mouse TDLo 1 day male.
ADDITIONAL DATA: The levels of copper, sulfur and zinc in the diet may have an effect on the toxicity.
HEALTH EFFECTS:

INHALATION

ACUTE EXPOSURE: May cause respiratory tract irritation, coughing and chest discomfort.
CHRONIC EXPOSURE: Chronic exposure of workmen in a molybdenum-copper plant produced liver dysfunction with hyperbilirubinemia. Similar hepatotoxic effects were found in animals given molybdenum salts.
SKIN CONTACT:
ACUTE EXPOSURE: Brief contact with dry skin is unlikely to cause irritation. On wet skin, irritation and a difficult to heal rash may occur. Primary irritation which appeared after 24 hours and cleared up after 72 hours has been reported in animals.
CHRONIC EXPOSURE: Prolonged contact with dry skin may cause irritation. Among chemists handling 4 molybdenum and tungsten solutions, there was a high incidence of gout.

EYE CONTACT

ACUTE EXPOSURE: May cause irritation. A 20% solution applied to animal eyes caused conjunctivitis with discharge, but no irritation to the cornea and iris.
CHRONIC EXPOSURE: No data available.

INGESTION

ACUTE EXPOSURE: Large doses may cause cramping, vomiting and hypertension. With lethal doses of molybdenum compounds, death was preceded by lethargy and coma.
CHRONIC EXPOSURE: Chronic feeding to rabbits at dietary levels of 0.1% or higher was uniformly fatal within a few weeks. There is a correlation between the molybdenum content in food and the incidence of gout, uricemia and xanthine oxidase activity. Signs of molybdenum poisoning include loss of appetite, listlessness, diarrhea and reduced growth rate. Animals on high dietary levels of molybdenum showed anemia and deformities of the joints of the extremities.

Section 12 - Ecological Information

FISH TOXICITY: >79800 ug/L 96 hour LC50 (Mortality) Striped bass (Morone saxatilis).
INVERTEBRATE TOXICITY: 2650000 ug/L 96 week EC50 (Immobilization) Amphipod (Crangonyx pseudogracilis).
ALGAL TOXICITY: 960000 ug/L 48 week (Cytogenetic) Flagellate euglenoid (Euglena gracilis).
OTHER TOXICITY: 960 ug/L 7 day LC50 (Mortality) Narrow mouthed frog (Microhyla carolinensis).

Section 13 - Disposal Considerations

WASTE DISPOSAL: Observe all federal, state and local regulations when disposing of this substance.

Section 14 - Transport Information

No classification currently assigned.

Section 15 - Regulatory Information

U.S. REGULATIONS:

TSCA INVENTORY STATUS Y
TSCA 12 (b) EXPORT NOTIFICATION Not Listed
CERCLA SECTION 103 (40 CFR 302.4) N
SARA SECTION 302 (40 CFR 355.30) N
SARA SECTION 304 (40CFR 355.40) N
SARA SECTION 313 (40 CFR 372.65) N
OSHA PROCESS SAFETY (29 CFR 1910.119) N
CALIFORNIA PROPOSITION 65 N

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40 CFR 370.21):

ACUTE HAZARD N
CHRONIC HAZARD N
FIRE HAZARD N
REACTIVITY HAZARD N
SUDDEN RELEASE HAZARD N
STATE REGULATIONS:

Bayer CropScience

Material Safety Data Sheet

42-S THIRAM FUNGICIDE

MSDS Number: 102000012786
MSDS Version 2.1
Revision Date: 06/18/2007

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name 42-S THIRAM FUNGICIDE
MSDS Number 102000012786
EPA Registration No. 264-929

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Thiram	137-26-8	42.00
1,2-Propanediol	57-55-6	

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution! Causes eye irritation. Causes skin irritation. Harmful if swallowed, inhaled or absorbed through the skin. Do not get in eyes, on skin, or on clothing. Avoid breathing spray mist.

Physical State liquid

Appearance light cream

Routes of Exposure Inhalation, Ingestion, Skin Absorption, Eye contact

Immediate Effects

Eye Causes eye irritation. Do not get in eyes.

Skin Causes skin irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing.

Ingestion Use of alcoholic beverages may enhance toxic effects. Harmful if swallowed. Do not take internally.

Inhalation May cause irritation of the mucous membranes. May cause respiratory tract irritation. Avoid breathing spray mist.